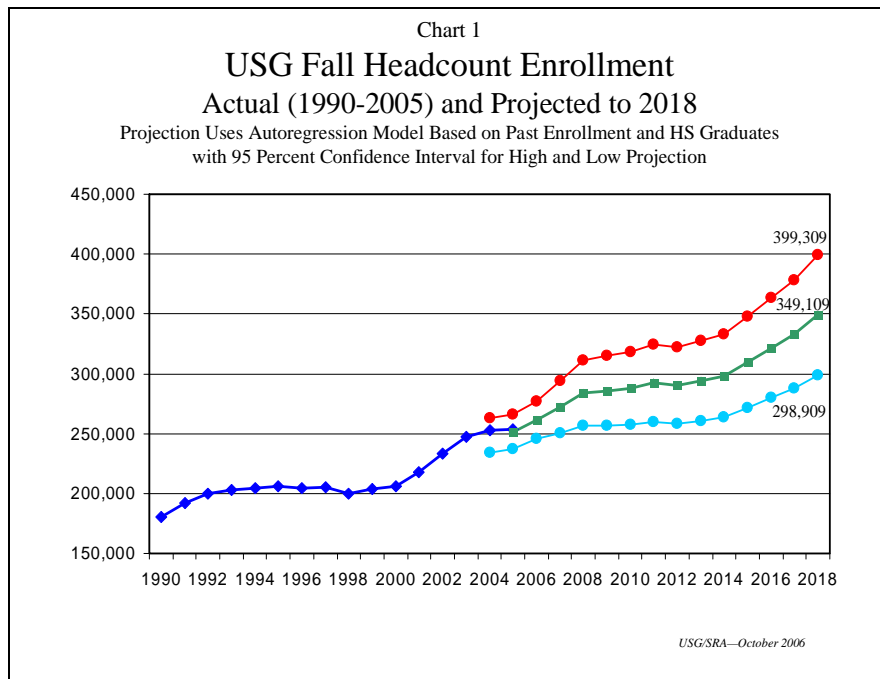


University System of Georgia Enrollment Trends and Projections to 2018

Introduction: Projections of USG Headcount Enrollment

Enrollment projections use past trends and information on other variables to predict the future. They are useful to the extent that the relationships between variables in the future are similar to those in the past. For the USG, these projections assume the high school graduation rate and the college going rate to be constant over the projections period. The number of high school graduates and past enrollment were used to predict USG headcount enrollment. The number of high school graduates was highly correlated with total fall headcount enrollment ($r=.94$) as well as with entering freshmen enrollment ($r=.93$).

The projected USG headcount enrollment from 2006 through 2018 is projected based on the WICHE projected number of public and private high school graduates and the previous fall's headcount enrollment.¹ Additional variables were tested but did not contribute statistically to the projection model. The 95 percent confidence limits for the statistical model are shown as the high and low estimates for projected enrollment in Chart 1. If the assumptions of no change in other relevant variables are upheld, actual enrollment would be expected to fall within the 95 percent band. Table 1 shows the projected number of high school graduates and the projected USG headcount enrollment through 2018.



¹ The statistical method used is a Box Jenkins model of autoregression with maximum likelihood estimation. Autoregression was used because the time series analyses indicated a significant lag 1 parameter. More complex ARIMA (Autoregressive Integrated Moving Average) models were investigated, but the results, as well as limitations based on the small number of observations, did not support their use.

Table 1
Georgia High School Graduates (Actual and WICHE Projections) and USG
Headcount Enrollment (Actual 1990 –2005 and Projected 2006-2018)

Year	Actual/Projected Georgia High School Graduates²	Actual/Projected USG Fall Enrollment
1990	61,653	180,447
1991	64,842	191,831
1992	64,403	199,642
1993	64,310	203,369
1994	63,940	204,200
1995	65,534	206,484
1996	64,024	204,332
1997	65,535	205,389
1998	67,016	200,102
1999	68,181	203,806
2000	72,250	205,878
2001	72,746	217,546
2002	<u>76,591</u>	233,098
2003	<u>77,800</u>	247,020
2004	<u>78,956</u>	253,000
2005	<u>79,935</u>	<u>253,552</u>
2006	<u>82,992</u>	<u>261,281</u>
2007	<u>86,871</u>	<u>272,438</u>
2008	<u>90,806</u>	<u>284,272</u>
2009	<u>91,506</u>	<u>285,953</u>
2010	<u>92,201</u>	<u>287,824</u>
2011	<u>93,737</u>	<u>292,552</u>
2012	<u>93,127</u>	<u>290,419</u>
2013	<u>94,312</u>	<u>294,153</u>
2014	<u>95,585</u>	<u>298,209</u>
2015	<u>99,167</u>	<u>309,763</u>
2016	<u>102,815</u>	<u>321,545</u>
2017	<u>106,376</u>	<u>333,056</u>
2018	<u>111,338</u>	<u>349,109</u>

² The numbers of public and non-public high school graduates from 1989-1990 through 2001-2002 and projected numbers of graduates from 2002-2003 through 2017-2018 are shown. The data are from the Western Interstate Commission for Higher Education (WICHE), 2003. The projections are based on data available from the National Center for Educational Statistics and take into account birth rates, migration, and grade-to-grade retention rates.

Future changes in trends in high school graduation rates, college participation rates, retention rates, time to degree, and the proportions of transfer and graduate students will affect the accuracy of the projections.

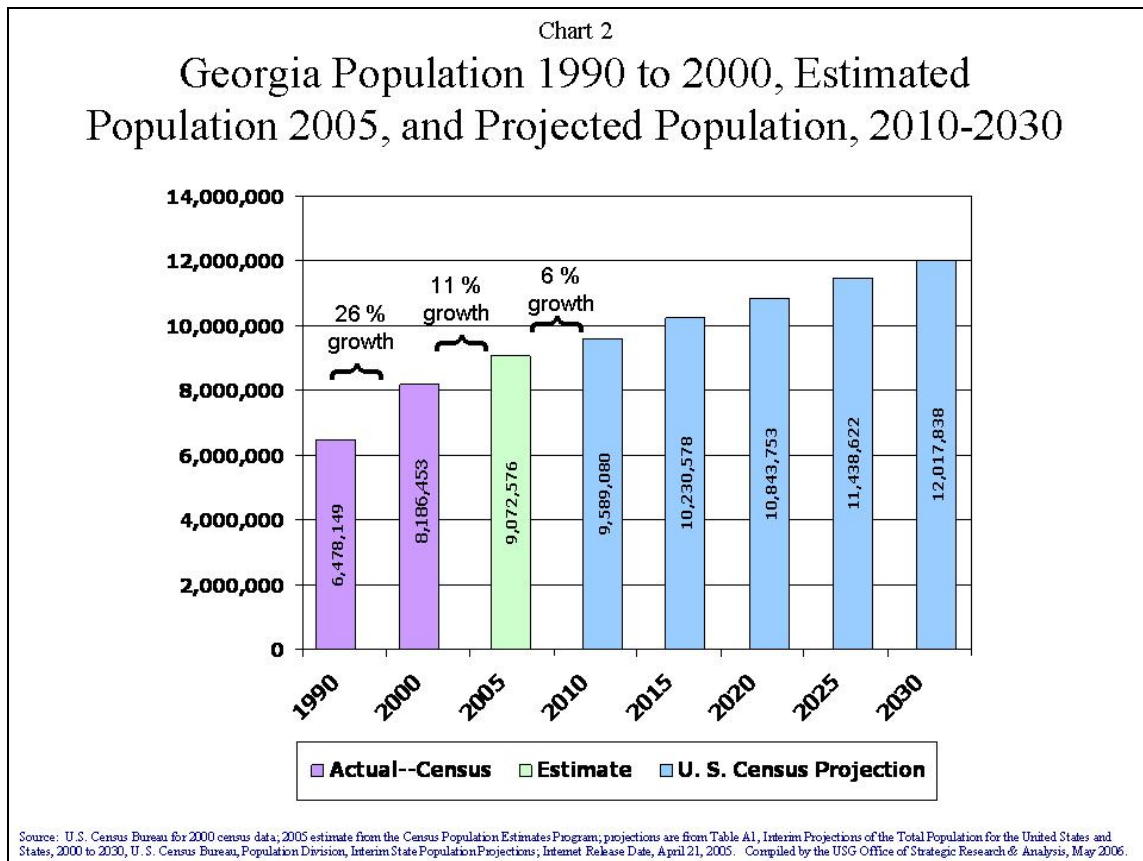
Factors Affecting Enrollment

Many factors affect the number of students who enroll in USG institutions, but the most important are population changes, the number of high school graduates, and the college participation rates of recent high school graduates. To achieve the mission of the USG to create *a More Educated Georgia*, a greater proportion of high school students must graduate from high school and enroll in college. The USG cannot achieve this goal alone.

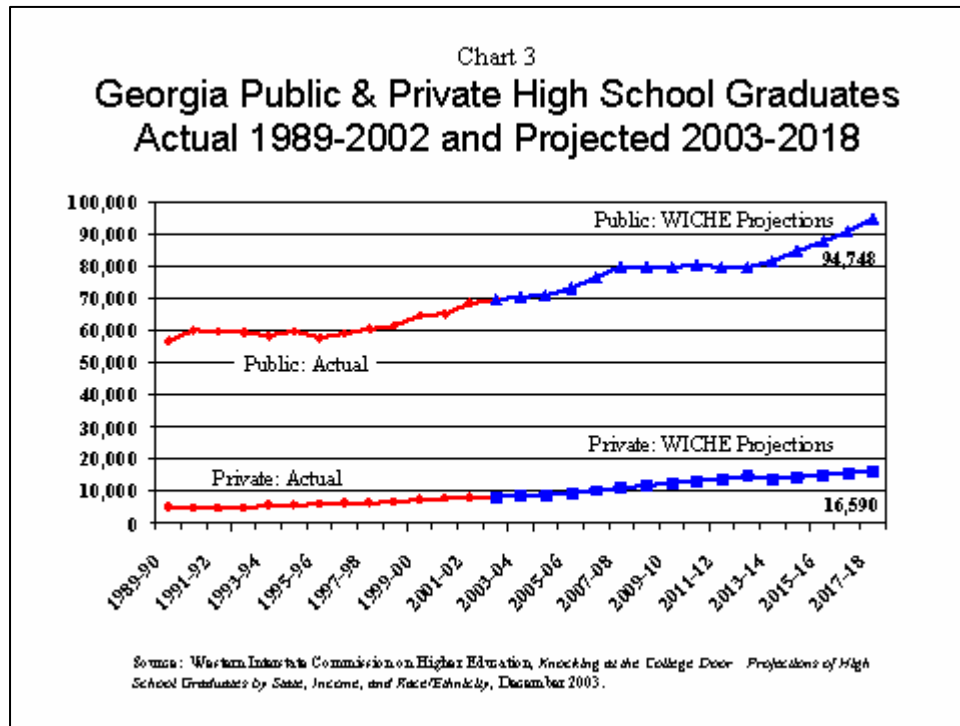
The three primary enrollment drivers, as well as several additional factors that affect enrollment, are discussed below.

Population Changes

The state of Georgia is one of the fastest growing states in the nation. Between 1990 and 2000, Georgia's population grew by 26 percent. Only three states, California, Texas, and Florida, had greater increases. This population growth will likely continue. The Census Bureau estimates that Georgia's population increased about 11 percent between 2000 and 2005 and expects the population to continue growing at a rate of about 6 percent per year until 2010 (Chart 2).



02 (Appendix 1). That is an average annual increase of 2.1 percent. In addition, WICHE projects a growth rate of 102.1 percent of private high school graduates in Georgia over the same period. Although WICHE's projections are somewhat more robust than the NCES projections, they have proved more accurate for Georgia. (See Chart 3.)



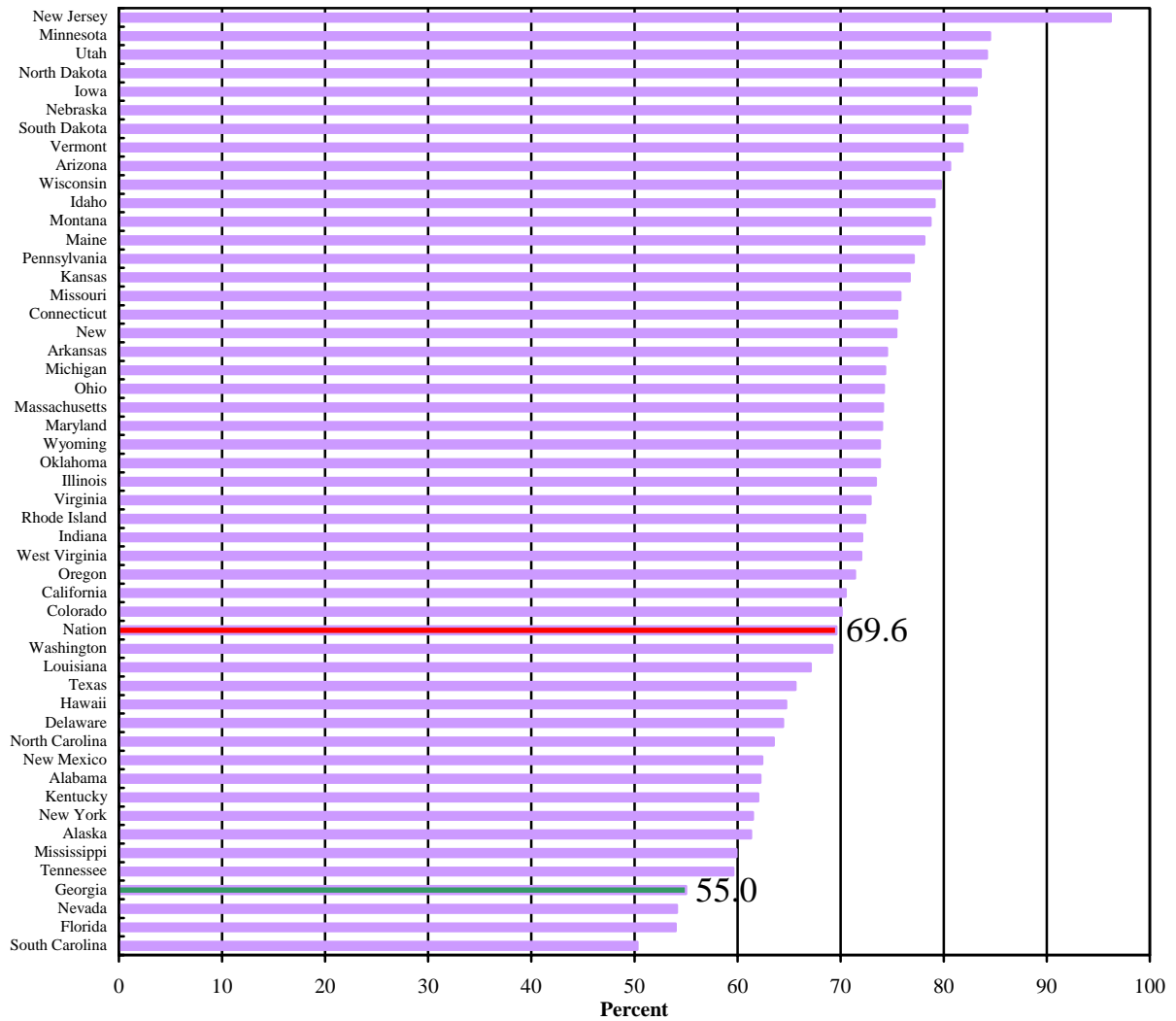
These projections reflect birth rates, net migration, and grade-to-grade progression rates. They assume the high school graduation rate will remain constant.

High School Graduation Rate

Georgia continues to have one of the lowest public high school graduation rates in the nation. In 2004, 55 percent of the 126,793 Fall 2000 ninth-graders at Georgia's public high schools graduated with a high school diploma, a rank of 47th among the 50 states (Chart 4).³ This represents a steady increase from 1999 when Georgia had the lowest high school graduation rate in the nation at 50.4 percent (but it represents a decline from 1990, when the rate was 63 percent).

³ The Georgia DOE reports a graduation rate of 70.8 percent calculated by definitions created for *No Child Left Behind*. This rate is not comparable to the rates cited above, as it is not calculated by the same method.

Chart 4
Aggregate Completion Rate for Public High Schools
Number of 2004 HS Graduates as Percentage of 2000 9th Graders



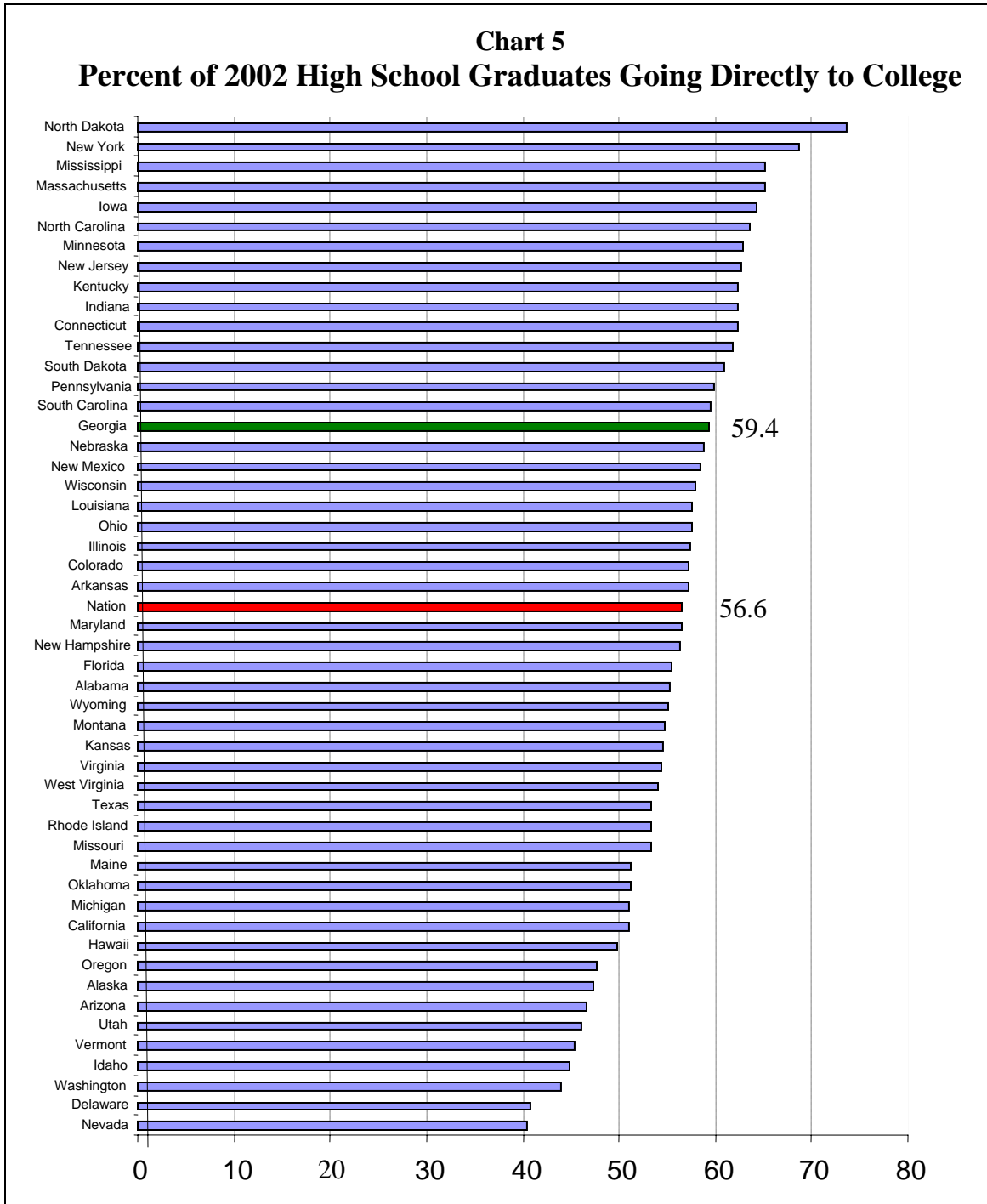
Source: Compiled by National Center for Higher Education Management Systems from IPEDS data. The rate does not include students who transfer to private high schools or out of state or adjust for students who are still enrolled.

Another demographic factor to be considered in the USG enrollment projections is the projected change in the composition of the high school graduate population by race/ethnicity. WICHE projections indicate a major increase in the number of Hispanic students and the percentage of students who are Hispanic. A detailed description of the increase in the Hispanic student population is provided in *The Educational Pipeline for Hispanic Students in Georgia*.⁴

⁴ *The Educational Pipeline for Hispanic Students in Georgia*, Office of Strategic Research and Analysis, Board of Regents of the University System of Georgia, December, 2003.

College Participation Rate

Although Georgia continues to experience relatively low high school graduation rates, the state compares favorably with many states in terms of the percentage of high school graduates going directly to college. In 2002, Georgia ranked 16th among the 50 states with 59.4 percent of 72,142 high school graduates going directly to college (Chart 5).



Source: Compiled by National Center for Higher Education Management Systems.

College Retention and Graduation Rates

Another cause of increased enrollment is the increasing likelihood that entering students will be retained and continue on to graduation. First-year retention rates have increased most years since 2000, and the percentage of full-time entering students graduating from a USG institution in six years has increased from 48.2 to 55.0 percent. In addition, a major initiative is now underway to further increase retention and graduation rates. If successful, this initiative could result in substantial enrollment increases as more students are retained and graduate.

Increased Access and Opportunity

Enrollment in the state college and two-year college sectors has been increasing more rapidly than in other sectors. The increased access offered by the recent change in admissions requirements for these sectors (elimination of the SAT/ACT testing requirement) may result in even greater increases in future years. In addition, the addition of new programs, a new state college, and expanded missions (such as the recent change of four two-year colleges to state colleges) may attract a larger proportion of Georgia citizens to higher education.

Georgia's Economy

The economy likely affects enrollment in college in varied ways. However, the effects of the economy on college enrollment are not directly measurable. Conventional wisdom in higher education is that a strong economy encourages some students who might otherwise enroll in college to enter the labor market, or to work a greater number of hours and enroll with fewer hours. A weaker economy encourages some students to enroll who might otherwise be in the labor market (however, it might also mean that some students must work more hours and enroll for fewer hours). In short, the effects of the economy on enrollment cannot be accounted for in a straightforward way.

Conclusion

Georgia will continue to experience higher than average population growth for at least the next 24 years. Based on population growth alone, we would expect fairly slow, but significant, enrollment increases at USG institutions. With the current high school graduation rates, USG headcount enrollment is projected to increase by more than 95,000 students by 2018.

USG enrollment projections, however, depend on more than just population projections. They must also make assumptions about the number of high school graduates and college participation rates. The current USG estimates are based on the assumption that the college participation rate and college retention rates remain at current levels.

However, it is critical for the state's future that a larger proportion of students graduate from high school. Current DOE efforts to strengthen the K-12 curriculum should result in higher graduation rates. If the state is successful in increasing the high school graduation rates, the USG will be challenged even more to enroll those students and graduate them in a timely

manner. Enrollment could increase at substantially higher rates than the USG projections indicate if the high school graduation rate for Georgia students increases.

For example, if the Georgia high school graduation rate had been at the national average since 1999 (67.1 to 69.7 percent, depending on the year), enrollment in fall 2005 would have likely increased by an estimated 33,787 students, the equivalent of 15.5 percent of headcount enrollment. If the Georgia high school graduation rate had been at the level of the top ten states (77.0 to 79.1 percent, depending on the year), enrollment in fall 2005 would have increased by an estimated 54,788 students, 25.1 percent of headcount enrollment, assuming that high school graduates continued to enroll in college at current rates. The numbers would be higher if the students who delay entering college are also considered.

Whether the high school graduation rate and college-going rates increase or not, educating the current projected number of high school graduates will challenge the USG's infrastructure in terms of both facilities and faculty.

Appendix 1
WICHE Public and Private High School Graduates
With Projections 2002-03 to 2017-18

	PUBLIC TOTAL	NONPUBLIC TOTAL	PUBLIC & NONPUBLIC TOTAL
1987-88	61,765	-	61,765
1988-89	61,937	-	61,937
1989-90	56,605	5,048	61,653
1990-91	60,088	4,754	64,842
1991-92	59,723	4,680	64,403
1992-93	59,520	4,790	64,310
1993-94	58,316	5,624	63,940
1994-95	59,735	5,799	65,534
1995-96	57,827	6,197	64,024
1996-97	58,996	6,539	65,535
1997-98	60,513	6,503	67,016
1998-99	61,356	6,825	68,181
1999-00	64,774	7,476	72,250
2000-01	64,969	7,777	72,746
2001-02	68,384	8,207	76,591
2002-03	69,412	8,388	77,800
2003-04	70,373	8,582	78,956
2004-05	70,773	9,162	79,935
2005-06	73,150	9,842	82,992
2006-07	76,516	10,356	86,871
2007-08	79,778	11,028	90,806
2008-09	79,757	11,749	91,506
2009-10	79,568	12,632	92,201
2010-11	80,407	13,330	93,737
2011-12	79,426	13,700	93,127
2012-13	79,495	14,817	94,312
2013-14	81,592	13,993	95,585
2014-15	84,663	14,504	99,167
2015-16	87,655	15,160	102,815
2016-17	90,576	15,800	106,376
2017-18	94,748	16,590	111,338

Source: Western Interstate Commission for Higher Education, *Knocking at the College Door, 1998 to 2018, Projections of High School Graduates by State, Income, and Race/Ethnicity*, December 2003. The definition of a high school graduate has been determined by the state.

For nonpublic graduates, the number of twelfth graders has been used to estimate the number of graduates. The enrollment data have been estimated using data available from the National Center for Education Statistics' *Private School Survey* in comparison with the public school grade distribution. Additional state-specific notes are also contained in the *Compendium of Supplementary Tables* to complement this report.